

Application No.: 10/731,560

Docket No.: 65783-0035

REMARKS

Claims 1-34 were pending. Applicant thanks the Examiner for indicating that claims 8-10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Applicant has amended independent claim 1 to include the limitations of claim 8. In addition, Applicant has added claims 35-36 and amended claims 9-10, 13 and 20-21 to further define the invention and to correct improper dependencies. Support for these amendments can be found throughout the specification, but particularly in paragraphs [0027] and [0031]. No new matter has been added. Claims 8 and 27-34 are canceled. Therefore, claims 1-7, 9-26 and 35-36 are now pending.

In addition, Applicant has amended the specification at paragraph [0029] to correct an informality noted by the Examiner. Specifically, line 9 of paragraph [0029] has been amended to replace "C3" with "C5." No new matter has been added.

Applicant respectfully requests reconsideration of the rejected claims in view of the preceding amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 102 and §103

Claims 13-25 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,910,890 to Hansen et al. In addition, claim 26 was rejected under 35 U.S.C. §103(a) as being unpatentable over Hansen. These rejections are respectfully traversed.

Application No.: 10/731,560

Docket No.: 65783-0035

Claims 13-25

Independent claim 13 is directed to a circuit for driving a coil-armature device that includes a first and a second switch. The second switch causes a driving voltage source to periodically energize the coil-armature device according to one of a first duty cycle and a second duty cycle. As amended, claim 13 further includes

an analog switch, responsive to a change mode signal, that causes a transition from said first duty cycle to said second duty cycle.

Applicant respectfully submits that Hansen does not teach or suggest an analog switch that causes a transition from a first duty cycle to a second duty cycle, as is now required by independent claim 13.

Rather, Hansen discloses a control circuit for actuating a set of switch contacts through a magnetic coil. (See Hansen, col. 1, lines 7-10). The magnetic coil is controlled by a transistor that receives a series of electrical pulses, which switch the transistor into a conductive state and apply current pulses to the magnetic coil. The series of pulses has a first duty cycle during a predefined period of time and a second duty cycle thereafter. (See Hansen, col. 1, line 60 – col. 2, line 9). As shown in Figure 2 of Hansen, the duration of this period of time is controlled by a timer circuit 34, which includes comparator 56. (See Hansen, col. 3, lines 54-67; Figure 2). The output of comparator 56 is connected to the input terminal of a PWM controller circuit 33. The change in reference voltage to the input of comparator 56 changes the voltage level of the input to the PWM controller 33, thereby changing the duty cycle. (See Hansen, col. 4, line 61-col. 5, line 48). In other words, it is timer circuit 34 that controls the transition between duty cycles in Hansen, not an analog switch. Indeed, Applicant is unable to

Application No.: 10/731,560

Docket No.: 65783-0035

identify any portion of Hansen that teaches or suggests an analog switch that causes a transition from a first duty cycle to a second duty cycle, as required by independent claim 13. Accordingly, independent claim 13, and dependent claims 14-26, which depend therefrom, are patentable over Hansen and in condition for allowance.

Claim 26

Claim 26 depends indirectly from independent claim 13. Therefore, for at least the reasons discussed above, the rejection of claim 26 should be withdrawn. Nevertheless, claim 26 recites independently patentable subject matter that is not taught or suggested by Hansen.

In the Office Action (page 13) the Examiner concedes that Hansen "does not teach a relay positioned between the first comparator and the second switch," but contends that Hansen teaches "that a transistor Q3 is positioned between the first comparator (60) and the second switch (Q2)." The Examiner further states that it would have been obvious to one of ordinary skill in the art at the time the invention was made "to use a relay instead of a transistor as the two are art recognized functional equivalents of each other." Applicant disagrees.

As known by one of ordinary skill in the art, a relay has inductance while a transistor does not. Consequently, from a functionality standpoint, transistor Q3 of Hansen cannot simply be replaced by a relay as the Examiner has suggested. However, to the extent the Examiner intends to take Official Notice that one of ordinary skill recognizes a relay and a transistor to be equivalents of each other, Applicant seasonably requests support for the taking of Official Notice, as provided by 37 CFR 1.104(d)(2) and MPEP § 2144.04. If documentary evidence of such Official Notice is

Application No.: 10/731,560

Docket No.: 65783-0035

not provided in the next Office Action, Applicant respectfully submits that the rejection of claim 26 should be withdrawn.

CONCLUSION

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and such action towards these ends is respectfully requested.

Any fee due has been addressed in an accompanying transmittal. Please charge our Deposit Account No. 18-0013, under Order No. 65783-0035 from which the undersigned is authorized to draw.

Dated: July 12, 2006

Respectfully submitted,



By Glenn E. Forbis

Registration No.: 40,610
RADER, FISHMAN & GRAUER PLLC
39533 Woodward Avenue, Suite 140
Bloomfield Hills, Michigan 48304
(248) 594-0636
Attorney for Applicant